DOCUMENT RESUME

ED 327 946 EA 022 603

AUTHOR Krug, Samuel E.; And Others
TITLE Current Issues and Research Findings in the Study of School Leadership. Project Report.
INSTITUTION Illinois Univ., Urbana. Beckman Inst. for Advanced Science and Technology.; MetriTech Inc., MI.; National Center for School Leadership, Urbana, IL.
SPONS AGENCY Office of Educational Research and Improvement (ED), Washington, DC.
PUB DATE 90
CONTRACT RI17C80003
NOTE 53p.
AVAILABLE FROM Publication Sales, National Center for School Leadership, 1208 W. Springfield, Room 208, Urbana, IL 61801 (Order No. PR-B005; $8.00).
PUB TYPE Reports - Research/Technical (143)

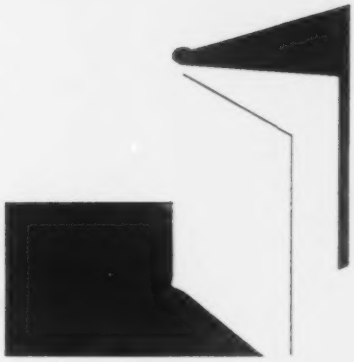
EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS Administrator Attitudes; Administrator Education; Educational Environment; Elementary Secondary Education; *Instructional Leadership; Leadership Qualities; Leadership Styles; *Principals; Professional Development

ABSTRACT

A set of objective instruments to assess school leadership and instructional climate were developed in this study designed to improve upon the primarily descriptive, individual-oriented leadership assessments of prior research. Self-reports on daily activities were elicited from 41 male and 40 female principals, and a leadership inventory was administered to compare the reported relative importance of behavioral descriptions with beliefs for the prediction of effective instructional leadership. Findings indicate that beliefs about work are a significant factor in explaining differences between leaders and that what is learned about instructional leadership is highly dependent on whom is asked. The implementation of an instructional leadership development program indicates that individually oriented programs are effective models for instructional leadership training. (35 references) (LMI)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED327946



Current Issues and Research Findings in the Study of School Leadership

Samuel E. Krug, Stephan A. Ahadi, and Christy K. Scott
MetriTech, Inc.

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
✓ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
S. Parker
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

EA 022 603

The National Center for School Leadership

Project Report

University of Illinois at Urbana-Champaign

University High Laboratory School

In collaboration with

The University of Michigan

MetriTech, Inc.

EA 022 603

About The National Center for School Leadership

Our objectives are to produce new knowledge about school leadership and influence the practice and preparation of school leaders. Through various research programs and dissemination activities, we aim to give school leaders effective strategies and methods to influence teaching and learning.

The Center is funded by a grant from the Office of Educational Research and Improvement (Grant No. R117C80003). Any opinions, findings, and conclusions expressed in this publication are those of the National Center and authors and do not necessarily reflect the views of the supporting agency.

Center staff

Russell Ames, Director
Martin Maehr, Co-Director
Stephanie Parker, Assistant Director

© Copyright 1990 The National Center for School Leadership

The National Center for School Leadership
University of Illinois at Urbana-Champaign
Beckman Institute for Advanced Science and Technology
405 N. Mathews
Urbana, IL 61801
(217)244-1122 Fax number (217)244-4948

The National Center for School Leadership

Committed to Leadership and Learning

Office of Educational Research and Improvement

Ronald Anson, Liaison

National Advisory Panel

David Clark, Chair
Professor of Educational Administration, University of Virginia

Martin Covington
Professor, Psychology, University of California at Berkeley

Gary Gottfredson
Professor, Center for Research on Elementary and Middle Schools, Johns Hopkins University

Milbrey McLaughlin
Professor and Director, Center for Research on the Context of Secondary School Teaching, Stanford University

Kent Peterson
Professor and Co-Director, National Center for Effective Schools Research and Development, University of Wisconsin at Madison

Marilyn Rauth
Director, Education Issues, American Federation of Teachers

Laraine Roberts
Director, Leadership in Educational Administration Development (L.E.A.D.) Project, California

Lynn St. James
Principal, Lindblom Technical High School, Chicago

Scott Thomson
Executive Director, National Association of Secondary School Principals

Lonnie Wagstaff
Professor, Educational Administration, University of Texas at Austin

Project Investigators

University of Illinois at Urbana
Carole Ames, Chair, Educational Psychology
Russell Ames, Director, University High Laboratory School
Ellen Russell, Associate Chair, Educational Psychology
Alan Peshkin, Professor, Educational Psychology
Frederick Wirt, Professor, Political Science

University of Illinois at Chicago
Larry Braskamp, Dean, College of Education

The University of Michigan
C. Philip Kearney, Professor, Education
Martin Maehr, Director, Education and Psychology
Carol Midgley, Project Associate
Karl Weick, Rensis Likert Collegiate Professor, School of Business

MetriTech, Inc.
Samuel Krug, President
Stephan Ahadi, Project Investigator
Chris Scott, Project Investigator

Illinois State Board of Education
Dianne Ashby, Program Development and Delivery

Visiting Scholars
William Boyd, Professor, Education, Penn State University
Robert Crowson, Professor, Educational Administration, University of Illinois at Chicago
Charles Kerchner, Professor, Education and Public Policy, Claremont Graduate School
Douglas Mitchell, Professor, Education, University of California at Riverside

Current Issues and Research Findings in the Study of School Leadership

Samuel E. Krug
President
MetriTech, Inc.

and

Stephan A. Ahadi
Christy K. Scott
MetriTech, Inc.

Abstract

Until recently, much of what was known about instructional leadership was based upon descriptive studies of a highly individual nature. In the interest of greater uniformity, we have devoted ourselves to developing a set of more objective instruments for better assessing school leadership and instructional climate; this paper presents a summary of our efforts over the last 5 years. From our quantitative, programmatic studies have emerged the following important findings: (a) What leaders believe about their work is paramount in explaining differences between leaders, and (b) what we learn about instructional leadership is highly dependent upon whom we ask. Additionally, we have been actively involved in an instructional leadership development program. Our experience here has shown that such a program, if geared toward the individual, will provide a solid model for effective training of instructional leaders.

Current Issues and Research Findings in the Study of School Leadership

For over a decade, researchers have studied characteristics and practices of principals associated with demonstrable improvements in student performance. Despite the broad scope of this research, much of it has remained at a purely descriptive level (Blase, 1987; Dwyer, 1985; Martin & Willower, 1981; Metz, 1978) or has failed to provide "intersubjectively confirmable observations" (Maehr & Fyans, 1990) on which to base scientific studies. In other words, our knowledge of instructional leadership is largely based on behavior descriptions taken from individual case studies. Since individual researchers differ in the level at which they choose to work, these descriptions vary dramatically from one researcher to another.

This problem has been the central theme of a programmatic research effort begun in 1985, which has resulted in the development and validation of a series of objective instruments for assessing instructional leadership and instructional climate (Braskamp & Maehr,

1988a; Braskamp & Maehr, 1988b; Maehr & Ames, 1988; Maehr, Braskamp, & Ames, 1988; Stonehouse, 1987; Suddarth, 1987). These instruments include principal self-report measures of leadership and the context in which it is exercised, teacher ratings of leadership and context, and student ratings of context. In addition, the development of these instruments has been guided by a theoretical framework that links leadership to student learning outcomes (see Krug, 1989, for a summary of the research background and its theoretical basis).

The need to go beyond the descriptive level, to develop explanatory models, and to consider underlying factors that help define the set of behaviors effective administrators use remains a critical problem facing the area of instructional leadership (Murphy, 1988). As Mitchell (1990) has noted, two widely held convictions about leadership are: (a) that leaders take individually coherent approaches to their work, and (b) that leadership behavior is contingent upon context and role. The former, based on the observation that some people appear to make better leaders than others, has led to a search for characteristics or indicators that

reliably differentiate people (e.g., Ghiselli, 1966; McClelland, 1985). The latter, based on the observation that good leaders appear to adapt to situations, led to attempts to delineate specific conditions under which certain leadership styles were more effective than others (e.g., Fiedler, 1964, 1969).

During the past 5 years, we and our associates have been involved in a programmatic, quantitative study of instructional leadership. As we use the term, instructional leadership describes a process of interaction by which certain individuals (e.g., principals or superintendents) focus available resources and activities of a school community on student learning outcomes. "School community" can be taken narrowly to refer to the staff and students who comprise a single school. Alternatively, school community can be construed more broadly to encompass interrelated schools (e.g., districts) and all those who serve or are served by these schools.

In our work, we initially studied individual schools. Gradually and systematically, we have expanded the scope of our inquiry to include entire districts and

other participants in the educational process. In doing so, we have studied many different schools, scores of principals, hundreds of teachers, and thousands of students. From this mass of data, several important findings have emerged to enhance our understanding of what instructional leaders do. In turn, that information has been helpful in designing programs to develop more effective instructional leaders.

Instructional Leadership Can Be Reliably Assessed Along Several Broad Dimensions

The instructional leadership research base identifies a wide range of administrator practices that are associated with measurable improvements in student achievement (Brandt, 1987). With the exception of efforts by Hallinger and his associates (Hallinger, 1984; Hallinger & Murphy, 1985), little attention has been directed toward developing structural models that simultaneously organize the diverse set of ways in which leadership is expressed and provide an objective basis for generating confirmable observations.

Our own approach began by thoroughly reviewing the instructional leadership research base. Using these findings as a guide, a team of principals, educational psychologists, and measurement specialists developed a pool of short, objective statements to assess this domain. A series of validity studies provided data that were subjected to various item-, factor-, and cluster-analytic analyses. The purpose of these studies was to identify broad dimensions within the larger domain of instructional leadership practices and to develop scales that reliably assessed these dimensions.

These studies resulted in the identification of five dimensions or categories of instructional leadership. Our initial studies relied on self-reports of practicing principals. Later, the items were adapted for use by teachers in order to provide a second perspective for studying school leadership. Since these five dimensions figure prominently in the research that is to be described, a brief definition of each is in order.

Defines Mission

Individuals who score high in this area describe themselves (and are described by teachers) as administrators who frequently discuss school goals, purposes, and mission with staff. They take advantage of opportunities to stress and communicate school goals. Further, they try to make themselves visible in the school building and they communicate excitement about education to staff and students.

Manages Curriculum

High scorers provide information teachers need to plan their work effectively. They work to ensure a good fit between curriculum objectives and achievement testing and actively support curriculum development. Their primary emphasis as administrator is with instructional rather than administrative, issues.

Supervises Teaching

Individuals who score high spend time working on teaching skills with teachers, observing classes, and encouraging staff to try their best. They coach and counsel teachers in a supportive manner. They attempt to critique teachers as though they were a mentor rather

than an evaluator. They encourage teachers to evaluate their own performance and set goals for their own growth.

Monitors Student Progress

People who score high in this area set high standards for student achievement. They regularly review performance data with teachers and use this information to gauge progress toward the school's goals. Individuals who score high provide teachers with easy and timely access to student assessment information.

Promotes Instructional Climate

Administrators who score high in this area nurture learning in a variety of ways. They encourage teachers to innovate. They regularly recognize staff members' efforts, write letters of commendation for a job well done, and ask parents to praise teachers for their good work.

These five dimensions have been incorporated into several studies designed to answer a series of fundamental questions about school leadership. Two of the more significant findings to date are: (a) leadership depends a great deal upon the beliefs of the

leader and the way in which the leader interprets events, and (b) what we learn about instructional leadership depends on whom we ask. Let us briefly consider each of these.

Leadership Depends on the Beliefs of the Leader

A great deal of research has attempted to explain consistencies in a leader's behavior and the effectiveness of that behavior on the basis of individual differences variables such as intelligence, dominance, task orientation, or need for power. For example, Ghiselli's (1966) review of hundreds of studies led him to conclude that intelligence, a strong personality, and a desire to succeed contributed significantly to leadership effectiveness. McClelland's (1985) Leadership Motive Syndrome is characterized by a high need for power, a low need for affiliation, and high activity inhibition.

Despite much evidence to suggest the existence of a "leadership profile," there are numerous exceptions to the rule. For example, Cattell, Eber, and Tatsuoka (1970) report that artists, biologists, employment

counselors, automobile mechanics, nuns, police officers, psychologists, school counselors, research scientists, junior high school teachers, writers, and even psychopaths all have higher average scores than three groups of identified leaders on a scale designed to assess Dominance. Airline cabin attendants and traveling salesmen score higher on a scale designed to measure Boldness. Both characteristics, Dominance and Boldness, would appear to be central to Ghiselli's definition of a "strong personality" or McClelland's definition of the "need for power." Yet, if the Cattell, Eber, & Tatsuoka (1970) results are representative, the average score for leaders is lower than that for a diverse sample of people in many different occupations on both characteristics.

Do such inconsistences suggest that personal characteristics can be ignored in studying leadership? Are characteristics such as Dominance or Boldness too "distant" from observable behavior to serve as useful explanations? Do situational or contextual variables offer more robust explanations?

Although we do not deny the importance of the context, we believe that personal characteristics provide useful explanations of what leaders do and why they do it. However, we do not believe that leadership is unidimensional. There are numerous characteristics that operate to predict leadership. As Ahadi and Diener (1989) have shown, when multiple, independent variables combine to predict behavior, the relationship between any one variable and a specific behavior need not be very high for that behavior to be entirely determined by the underlying set of variables.

One possibility we have explored is that the leader's beliefs represent an appropriate level for understanding both transituational consistency and contextual variations in behavior. Since Kelly's (1955) seminal work, a substantial body of research has developed with respect to what he termed personal constructs. Kelly proposed that people develop unique construct systems which they use to anticipate events and which, in turn, influence the direction behavior takes. In Kelly's thinking, it is not simply the event

that shapes the response but rather the individual's interpretation of the event.

Most researchers in the area of instructional leadership rely on data from field observations or teacher ratings as the basic source of information regarding what makes some principals better leaders than others. In doing so, they fail to consider an important but nonobservable dimension--the network of beliefs that forms a basis for individual actions. The consequences of this failure are twofold. First, a significant, but potentially very useful, amount of information about a situation is lost when we fail to consider the link between overt behavior and how actors perceive or interpret that behavior in the context in which it occurs. Second, not only does behavior have meaning for people, but the same behavior may be interpreted very differently by different people. For example, monitoring the cafeteria may be viewed by one principal as an unwelcome interruption but by another as an opportunity to keep in touch with students and how they are progressing.

Noting that few studies on instructional leadership have been pursued from the perspective of the instructional leader and at a level other than descriptive behavioral accounts provided by individual researchers, Scott, Ahadi, and Krug (1990) designed a study to examine the perceptions and beliefs that principals hold for their own behavior. The study was intended to determine whether beliefs provide a link across the many diverse activities and mark a principal's day (National Center for School Leadership, 1990).

In order to assess the daily events and principals' perceptions or interpretations of these events as they relate to instructional leadership, an Experience Sampling Methodology (ESM; Csikszentmihalyi, Larson, & Prescott, 1977) was utilized. In general, the ESM is a technique in which signaling devices carried by the respondents are used to elicit self-report data at random times. Unlike structured observations or shadowing, where outsiders interpret behavior, this methodology assesses principals' own interpretation of their behavior. In addition, since individuals report

and interpret their behavior at the time it is actually occurring, the data are minimally influenced by memory biases. Since there is no outside observer involved, the degree to which the principal feels "watched" is minimized.

Participants included a sample of 41 male and 40 female principals representing a cross section of suburban schools in a large metropolitan area. Forty percent of the principals had 1-5 years of experience in the principalship, another 40% had 6-15 years of experience, and the remaining 20% had more than 15 years of experience. The breakdown by school level was as follows: elementary-74%, middle school/junior high-21%, high school-5%. Twenty percent of the schools had less than 300 students, 20% had 300-400 students, and 60% of the schools represented had over 500 students.

Five times each day for 5 consecutive work days, we activated a pager that each principal carried. The times were scattered randomly throughout the day from 7:00 a.m. to 9:00 p.m. Each time they were paged, principals stopped and completed a short form designed to record what they were doing, their interpretation of

that activity, and their feelings at the time. The form was designed so that it would take only a few minutes to complete. Despite a few unpredictable incidents (i.e., pagers that went off while two principals were on a radio show), principals were very cooperative. In the end, we were able to capture 25 moments out of each principal's work week. Events ranged in intensity from very vivid (e.g., "On the telephone with a parent regarding her son asking another student if he wanted cocaine") to less exciting (e.g., "Driving to school"). Each time they were paged, principals described what they were doing. In addition, they had an opportunity to explain the relevance, if any, of that activity to instructional leadership and describe how they felt about what they were doing.

In addition to the momentary data, we needed a criterion for judging leadership effectiveness. For this purpose we selected the Instructional Leadership Inventory (ILI; Maehr & Ames, 1988). The ILI contains scales that assess the five instructional leadership areas discussed earlier (Defines Mission, Manages Curriculum, Supervises Teaching, Monitors Student

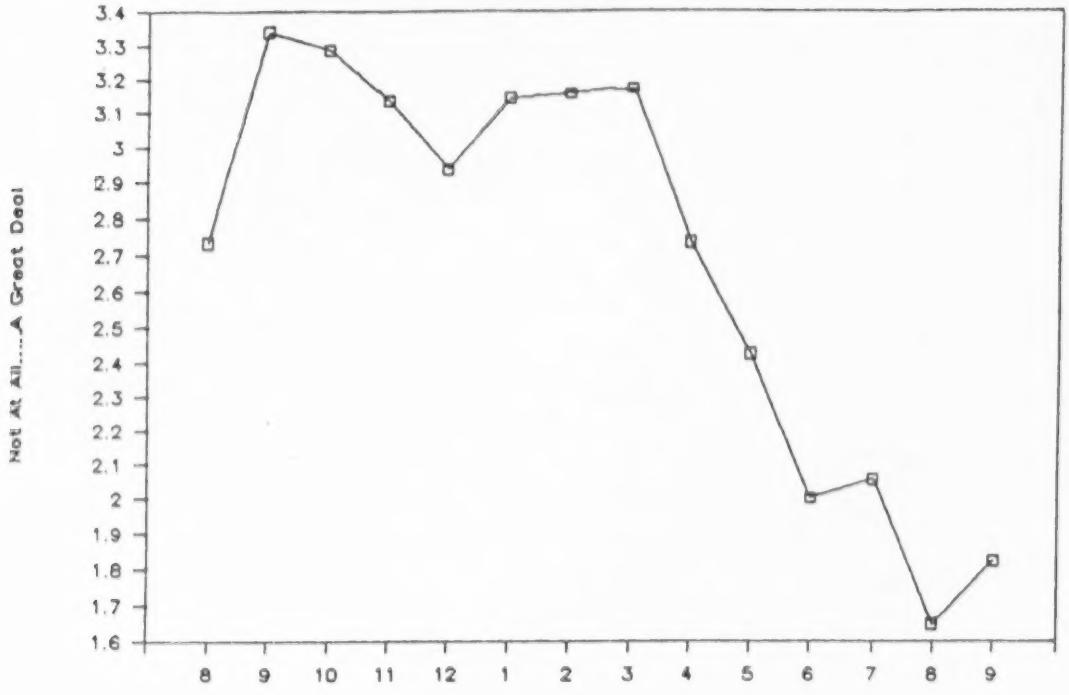
Progress, and Promotes Instructional Climate). Scale reliabilities range between .74 and .85 (median = .80). Krug (1989) summarizes a series of studies that support the validity of the ILI as a measure of instructional leadership. These studies include correlations with other self-report measures of instructional leadership, correlations with superintendent ratings of instructional leadership, and correlations with relevant external criteria.

To summarize briefly, this research was designed to study the activities of principals in the course of their ordinary work day. In addition to recording what they did, principals explained the relevance of their activity to instructional leadership and told something about their feelings. We then compared the relative importance of behavioral descriptions versus beliefs in the prediction of effective instructional leadership.

The differences between measurements made before and after approximately 3:30 p.m. (i.e., when students leave the building) represent a significant dichotomy in a principal's day. For most principals, the day changes dramatically when students leave. However, the

direction of change may not have been reliably predictable at the outset of the study. For example, one question we asked was "How satisfied are you with what you're doing?" Principals rated themselves on a five-point scale for which "5" meant "A Great Deal" and "1" meant "Not At All." As Figure 1 shows, principals' ratings of satisfaction drop precipitously at 3:30 p.m. Apparently, much of the satisfaction they derive is related to opportunities to work with and interact with students. On the other hand, leadership itself and opportunities for providing leadership do not end when students leave the building. Many principals, although certainly not all in our sample, find numerous opportunities for communicating school goals, working on curriculum issues, and providing a positive school climate after 3:30.

Figure 1. What I'm doing is important



As we had anticipated, there were significant variations in the activities principals pursue and how they pursue them. On average, however, about as much of the variation in those activities can be explained by events as by differences among principals (Krug, Scott, & Ahadi, 1989). However, a dramatically different picture emerged when we analyzed the interpretive items (e.g., "Right now I am defining and/or communicating a

school goal," or "Right now I am communicating expectations for student performance"). For these items, the effects attributable to differences among principals were much larger. That is, principals' beliefs about that they are doing are much more significant than the activities themselves in explaining differences among principals.

As we analyzed further, it was the differences in beliefs, not in activities, that differentiated more effective from less effective instructional leaders. When we looked at the relationship between momentary ratings and scores on the ILI, the picture was essentially one of zero correlations for activities but uniformly positive, significant correlations for beliefs. One conclusion to be drawn is that strong and weak instructional leaders engage in the same tasks. However, more effective instructional leaders conceptualize and utilize these activities as opportunities for exercising instructional leadership. In other words, instructional leadership can be better conceptualized as an approach to school administration rather than as a specific set of practices. Countless

demands are placed on the principal, and these demands result in many of the principals' activities being brief, diverse, and fragmented (Schainker & Roberts, 1987). Consequently, when principals seek to become effective leaders of instruction, their underlying beliefs about what they are doing must provide the bond among the kaleidoscope of changing events, activities, stresses, and rewards that represents a principal's day.

What We Learn About Instructional Leadership Depends on Whom We Ask

One practical consequence of choosing to study beliefs and goals is that we must rely increasingly on individual self-reports for our data. Because an external observer has no direct way to validate the intent or purpose of an action, an observer can only legitimately describe behavior, not interpret it. External descriptions may corroborate self-reports of beliefs or perceptions, but external descriptions cannot substitute for them.

This is not to suggest that self-report is without its limitations. Every observation is subject to

distortion of some kind. In the study of school leadership, concerns about impression management have led some researchers to rely on more "objective" evidence drawn from teacher's ratings (see, e.g., Hallinger, 1984). However, teachers' ratings simply substitute a collection of individual perceptions for a single perception.

Nevertheless, it would appear that teacher ratings have become the method of choice in the study of instructional leadership. One the one hand, they appear to correlate with school productivity (Keeler & Andrews, 1973) and student achievement (Eberts & Stone, 1988). Teacher ratings also have the desirable quality of allowing researchers to avoid the presumed bias of self-report.

With regard to the observation that teacher ratings of instructional leadership correlate with various student outcomes such as achievement scores (e.g., Eberts & Stone, 1988), it seems clear that teacher ratings represent a valid diagnostic appraisal of a school's level of functioning. However, teacher ratings have been used not only to assess overall school

effectiveness, but also to evaluate specific principal instructional leadership behaviors (e.g., Hallinger & Murphy, 1985; Yukl, 1981). Such an extension obviously assumes that when teachers rate a principal, those ratings are more heavily influenced by the specific behaviors the teachers are evaluating and not general perceptions of the school's climate.

How precisely are teachers able to distinguish leadership activity from its impact on the climate or culture of the school? How reliable are those perceptions when they are aggregated across many different teachers within a school? Do teachers agree with what principals say about themselves?

Ahadi, Scott, and Krug (1990) conducted a study designed to answer questions about the reliability, validity, structure, and utility of teacher ratings. For this study, the ratings of 1700 teachers were compared with those of the 81 principals we described earlier. About 60% were elementary teachers, 30% were middle school/junior high teachers, and 10% taught at the high school level. Roughly one in five was male. With respect to age, the largest single group was in the

40-49 year range. Only about 16% of the entire sample were 50 years of age or older and the sample was predominantly white. Minority teachers represented only about 5% of the total group. More than half had been teaching for 13 years or more and more than half had earned degrees beyond the bachelor's level.

Teachers completed the teacher form of the Instructional Climate Inventory (ICI-T; Maehr, Braskamp, & Ames, 1988). The ICI-T contains 48 items that are parallel to those in the principal's form. The only difference between those two set of items is the prompt. Teachers are asked, "To what extent do administrators in this school..." and provided with the same five response options.

The ICI-T also includes 60 items designed to assess the school's climate. These items were adapted from a more general measure of organizational culture developed by Braskamp and Maehr (1985). The ICI-T yields scores for seven dimensions: Job Satisfaction, Job Commitment, Strength of Climate, Accomplishment, Recognition, Power, and Affiliation. The last four scales measure the degree to which teachers perceive the school climate as

one that values and emphasizes each of these characteristics. Table 1 provides descriptions of the seven climate scales. For the instrument as a whole, reliabilities (scale internal consistency coefficients) range between .51 and .91 (median = .85).

Table 1

Brief Description of the ICI-T Climate Scales

Job Satisfaction

The Job Satisfaction scale includes items that correspond to major facets of job satisfaction identified in the research literature: satisfaction with work itself, with pay, with promotion, with supervision, and with co-workers. Higher scores indicate more positive attitudes toward all of these areas.

Job Commitment

The Job Commitment scale measures acceptance of, and loyalty to, the school. It measures sense of pride and ownership in the school. High scores mean that teachers have expressed a high degree of commitment and loyalty to the school. When the score is high, the climate is

one in which teachers take considerable pride in working at the school and have a strong belief in its values.

Strength of Climate

Strength of Climate refers to the saliency of the instructional climate. In other words, it refers to how obvious or clear are the goals and purposes of the school. Faculty and staff at schools with high scores report that they are clearly aware of the school's goals and purposes. Teachers at high-scoring schools believe that they know what the school stands for.

Accomplishment

High scores on this scale mean that the school is perceived as emphasizing excellence and quality in what it does. These schools are described as being extremely supportive of teachers who try new ideas and are innovative in their problem solving. These schools generally try to provide a high degree of freedom and autonomy in order for teachers to be creative and innovative; teachers do not have to worry if a new idea fails. Quality education is emphasized throughout the school; there is a clear focus on excellence.

Recognition

When this scale is high it means that the school climate is perceived as valuing and rewarding good efforts. Teachers feel that they are treated as adults and as winners. Productivity by teachers is very visibly rewarded. They are encouraged to work hard and are reinforced for doing so. Payoffs for doing a good job are readily available. Overall, the school's environment is viewed as a very positive one. The school not only encourages effort but also does something concrete about it in terms of a well-regarded reward system.

Power

A high score on this scale means that teachers at this school rate the school's climate to be one that places considerable emphasis on competition. Teachers in these schools describe the climate as one in which they are regularly involved in competitions with co-workers. Conflict among teachers may be a frequent by-product, but teachers feel that those in power regard it as healthy and normal. A high score means that the atmosphere of the school can best be viewed as

competitive. However, it may not necessarily be a hostile and destructive one if the school consciously sets this tone in the hopes of encouraging ambitious teachers to achieve to their maximum.

Affiliation

When this scale is high, it means that teachers consider the school climate to be one of trust and respect. A strong supportive feeling exists that is felt by most of the teachers. Sharing of information, involvement in decision making, and mutual cooperative problem solving are some activities that describe the climate from the teachers' perspective. Teachers feel that the school really cares about them. Thus, words such as caring, sharing, trusting, and cooperative describe the school's climate.

In this study, we learned that teacher ratings of both instructional leadership and school climate are influenced by several demographic factors. Table 2 summarizes the results of a series of analyses of variance (ANOVAs). In each case, teacher scores on one scale of the ILI-T represented the dependent measure.

Entries in Table 2 show both the F-ratio, associated with a test that the independent variable has no effect on the rating variable, and its associated probability. A significant F means that the independent variable does have a significant effect on the rating variable.

Table 2

Summary of Demographic Influences on Teacher Ratings of Instructional Leadership and School Climate

	Demographic variable[a]					
ICI-T Scale	1	2	3	4	5	6
Defines Mission	17.50	2.62	3.84	1.81	7.46	8.88
	.000	.106	.004	.123	.000	.000
Manages Curriculum	15.29	1.32	4.48	3.00	4.54	9.10
	.000	.250	.001	.018	.001	.000
Supervises Teaching	7.79	.06	4.58	2.04	10.20	9.60
	.000	.805	.001	.085	.000	.000
Monitors Student	27.71	.87	2.43	1.71	4.40	9.99
Progress	.000	.349	.046	.144	.002	.000
Promotes Instructional	4.51	.43	2.44	1.11	5.59	4.56
Climate	.011	.509	.045	.346	.000	.003

	Demographic variable[a]					
Satisfaction	9.28	11.04	5.59	1.89	2.53	3.05
	.000	.001	.000	.109	.039	.027
Commitment	24.40	11.58	3.98	1.43	.70	4.81
	.000	.001	.003	.219	.592	.002
Strength of Climate	3.06	4.42	3.81	2.46	1.37	3.58
	.047	.036	.004	.043	.240	.013
Accomplishment	23.05	16.68	.93	2.76	4.29	7.65
	.000	.000	.443	.026	.002	.000
Recognition	.67	2.52	4.69	2.45	7.47	5.85
	.509	.112	.001	.044	.000	.001
Power	12.45	10.51	.82	1.90	.54	.41
	.000	.001	.507	1.08	.700	.746
Affiliation	14.59	6.18	5.31	2.94	5.35	6.47
	.000	.013	.000	.202	.000	.000

[a] Demographic variables are identified as follows: 1--school level; 2--gender; 3--age; 4--ethnicity; 5--years of teaching experience; 6--highest degree earned.

Type of school (elementary, junior high/middle, high) appears to be the most important factor with respect to variance. Elementary school teachers rate the extent to which school leaders monitor student progress higher than middle school/junior high teachers and more than half a standard deviation above high school teachers. The pattern of differences is approximately the same for the Accomplishment scale despite the use of separate norms. Women score approximately one-third of a standard deviation higher on the Accomplishment scale than men. Other large gender differences are found on the Commitment and Satisfaction scales, where women obtain higher scores, and the Power scale, where men obtain higher scores. Neither age nor ethnic status appears to impact much on ICI-T ratings. However, because there was relatively little ethnic diversity in this sample, it would be premature to conclude that ethnicity is not an important factor. Experience and education appear to have a larger impact on ratings of instructional leadership than ratings of school climate.

In short, there is a lot of variance in teacher ratings that is not directly related to what they are rating. Some of this variation is attributable to school setting; some of this variation is attributable to characteristics of the teacher. Consequently, if teacher ratings are to provide a valid perspective on the school or school leaders, they must be aggregated across sufficient numbers of teachers to be reliable. When we looked at this problem more carefully, we found interrater reliability coefficients to range between .53 and .95, depending on which scale of the ICI-T we examined and the number of teacher ratings that were aggregated. The Power scale fared the poorest across teachers. A minimum of 35 teachers would be required to obtain a reliability of .80. Disagreements among raters on the Power scale may be partly attributed to the brevity of the scale (five items) and partly to variations in individual interpretations of competition, which appears in three of the items. That is, differences in ratings across teachers within a school may partly reflect personal values.

Comparatively low reliabilities for the Satisfaction and Commitment scales possibly reflect the personal nature of the items. For example, these scales include such items as "I feel I get sufficient pay for the work I do." Responses to such an item may be more variable across people than one like "This school stresses excellence" (Accomplishment) in which the focus is external rather than internal.

Although zero-order correlations between the leadership scales of the ICI-T (teacher ratings) and the ILI (principal self-reports) are moderate, multiple correlations are reasonably high. This suggests that although teachers may use a somewhat different rubric to classify instructional leadership behaviors than principals, overall they are in general agreement that this behavior is occurring. In general, the two most predictable scales of the principal self-reports are Defines Mission and Manages Curriculum. Furthermore, when the analysis was restricted to elementary schools where principals and teachers often have more direct contact, the level of predictability increased significantly. The corresponding multiple Rs were as

follows: Defines Mission--.58, Manages Curriculum--.61, Supervises Teaching--.35, Monitors Student Progress--.41, and Promotes Instructional Climate--.38.

When we factor analyzed the scales of the ICI-T, two second-order factors emerged. One represented the five instructional leadership scales. A second factor represented the seven climate scales. However, the correlation between the two factors (.80) was very high. Consequently, our results suggest that instructional leadership and school climate are intimately linked in the minds of teachers. It is unclear from these data, however, whether teachers rate the school's culture as being more positive when they perceive a sense of strong instructional leadership or whether their sense of satisfaction with school's culture causes them to infer the existence of strong instructional leadership.

What we learned from these studies is that teacher ratings of instructional leadership and school climate are influenced by a number of demographic factors. Nevertheless, they are reliable (i.e., consistent across teachers within a school) when psychometrically adequate items are aggregated across sufficient numbers of

teachers. Despite the limited amount of time that most teachers interact with principals, teacher ratings of instructional leadership behavior are significantly correlated with principal self-reports. The agreement is far from perfect, however.

A comprehensive approach to the evaluation of instructional leadership should ideally rely on both kinds of measures. Each provides a valid, distinct perspective on leadership within the school. As everyone knows, it isn't necessary to examine the mechanism in order to tell whether a clock is keeping time or not. In the same way, teachers may not fully understand the motives that underlie a principal's actions, yet they may still provide valid information about whether the school's leadership is working or not.

What Are the Implications of this Research for Developing More Effective School Leaders?

At the same time that we have been engaged in the study of school leadership, we have been involved in the development of more effective school leaders. The model we have chosen as a foundation for our development

program combines several key elements--self-assessment, on-site observation, supportive feedback, planning, and implementation--operationalized in an agenda of specific activities that require many months to complete. The long-term nature of the program reflects a belief that significant change requires time and commitment.

The implementation of this model instructional leadership development program on a statewide basis by the Illinois State Board of Education (ISBE) has provided an ideal situation within which to study and refine the basic model. The program was first offered in 1988 through the ISBE's Illinois Administrators' Academy, which was established to provide relevant and meaningful continuing professional education to school administrators. One of the key features that distinguished this program from other Academy offerings was its individualized nature: participants work one-on-one with individuals in their geographic area who have been specially trained in the model (ISBE, 1988).

Prior to September 1988, approximately 75 educators volunteered for an intensive, week-long training program. They came from a variety of backgrounds. Some

currently served as principals or district superintendents. Others came from university settings. Approximately 20% had retired from active service. What united the group was a great deal of experience and a strong commitment to professional continuing education. Because their role involved them very heavily in assessment and analysis of instructional leadership data, they become known as Leadership Analysts.

Self-assessment provides the first step in the development program. During the training, these educators became familiar with the set of questionnaires and surveys we designed to assess instructional leadership and school instructional climate. On-site observation by the Leadership Analyst provides a second perspective for comparing and cross-referencing these results. Through this structured observation process Leadership Analysts became aware of participants' unique situations and special factors that needed to be considered in tailoring development objectives. During a typical on-site visit, Leadership Analysts completed four activities: (a) observing a group meeting with the administrator and staff to evaluate patterns of

interaction particularly relevant to instructional leadership behavior; (b) observing the administrator during a teacher post-observation conference; (c) conducting structured interviews with staff and students; (d) reviewing pertinent documents (memos, letters, parent information bulletins, newsletters) that provide a written record of instructional leadership attitudes and behavior.

The time demands on both participants and Leadership Analysts is quite heavy. The typical Leadership Analyst spent about 15 hours in direct contact with a participant. Note that this represents the amount of time spent in direct contact only. It does not include preparation time. Participants, on average, devoted 2-3 times as many hours to the program.

Within the first few months of operation, the demand for the service quickly exceeded initial expectations. In many regions, a waiting list soon developed. Part of this success lies in the unique, one-on-one nature of the program and the dedication and commitment of those who serve as Leadership Analysts. For many building administrators, regular opportunities

to have such skilled colleagues available as "sounding boards," advisors, or mentors helped alleviate the sense of isolation so many principals regularly experience.

During the following year, we had several opportunities to evaluate various elements of the model development program. In one study, for example, we provided Leadership Analysts with diaries in order to maintain detailed records of their progress with participants throughout the process. In a second study, we conducted both structured group interviews and a mail survey of participants and Leadership Analysts. The following comment from one Leadership Analyst was typical of most we received:

> The participant was very pleased with the whole process. He expressed his feelings about this several times. He felt that the process has made an important difference both to him personally and to the school....I found these schools to be very good to work with and enjoyed the time I spent with them. I also felt I was able to learn from the process.

One conclusion we have reached is that an instructional leadership development program, grounded in sound assessment practices with development plans based on individual needs and training strategies tied to individual strengths, provides a solid model for effective training of instructional leaders. The assessment framework provides a foundation of objective data on which to develop realistic plans for change. However, although it is necessary for successful change, the assessment framework is not sufficient for the success of such a program. The long-term involvement of a skilled colleague, who is aware of the participant's unique situation and is committed to helping, represents a vital element.

What Are Some of the Most Significant Questions that Remain to be Examined?

Our findings with respect to instructional leadership and school climate rest on an accumulation of data across many different schools, principals, teachers, and students. The integration of these findings has been greatly facilitated by relying on

quantitatively based designs that yield psychometrically equivalent observations across a variety of contexts and thousands of individuals. The approach has proven productive in providing answers to a number of important questions about school leadership. Many other important questions remain to be answered.

For example, how broad is the instructional leadership role? Most of the work on instructional leadership to date has focused on the principal. A limited amount of research has been directed toward the superintendency. What about the other significant participants in the educational process? Teachers clearly occupy the predominant leadership role in the classroom. To what extent do they feel actively and effectively involved in leadership outside the classroom walls? If classroom goals conflict with broader school goals, how is that conflict resolved? What should be done about the role of members of boards of education? Is theirs to be primarily an administrative or a leadership role within the district? How can local boards stimulate and reinforce instructional leadership

at the building level? And what role should parents and members of the school community play in the process?

We have learned much about how to measure instructional leadership. This research has resulted in the development of models that serve not only to guide our research activities but also to guide the development of practical programs for administrator development. Despite the distance we have come, there are still many significant questions that remain to be answered before we are no longer a nation at risk.

References

Ahadi, S.A., & Diener, E. (1989). Multiple determinants and effect size. Journal of Personality and Social Psychology, 56, 398-406.

Ahadi, S.A., Scott, C.K., & Krug, S.E. (1990). Reliability, validity, scope, and demographic correlates of teacher ratings of instructional leadership and school instructional climate. (Technical Report 8C2104-103). Champaign, IL: MetriTech, Inc.

Blase, J.J. (1987). Dimensions of effective school leadership: The teacher's perspective. American Educational Research Journal, 24(4), 589-610.

Brandt, J.J. (1987). On leadership and student achievement: A conversation with Richard Andrews. Educational Leadership, 45, 9-16.

Braskamp, L.A., & Maehr, M.L. (1985). SPECTRUM: An organizational development tool. Champaign, IL: MetriTech, Inc.

Braskamp, L.A., & Maehr, M.L. (1988a). School Administrator Assessment Survey. Champaign, IL MetriTech, Inc.

Braskamp, L.A., & Maehr, M.L. (1988b). Instructional Climate Inventory: Form S. Champaign, IL: MetriTech, Inc.

Cattell, R.B., Eber, H.W., & Tatsuoka, M.M. (1970). Handbook for the sixteen personality factor questionnaire. Champaign, IL: Institute for Personality and Ability Testing.

Csikszentmihalyi, M., Larson, R., & Prescott, S. (1977). The ecology of adolescent activity and experience. Journal of Youth and Adolescence, 6, 281-294.

Dwyer, D.C. (1985). Contextual antecedents of instructional leadership. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, IL.

Eberts, R.W., & Stone, J.A. (1988). Student achievement in public schools: Do principals make a difference? Economics of Education Review, 7(3), 291-299.

Fiedler, F.E. (1964). A contingency model of leadership effectiveness. In L. Berkowitz (Ed.), Advances in experimental social psychology (pp. 149-190). New York: Academic Press.

Fiedler, F.E. (1969). A theory of leadership effectiveness. New York: McGraw Hill.

Ghiselli, F.E. (1966). The authority of occupational aptitude tests. New York: Wiley.

Hallinger, P. (1984). Principal instructional management rating scale. New York: Leading Development Associates.

Hallinger, P., & Murphy, J. (1985). Assessing the instructional management behavior of principals. The Elementary School Journal, 86(2), 217-242.

Illinois State Board of Education. (1988). Clinical strand. Illinois Administrators' Academy Monograph Series, Paper #4.

Keeler, B.T., & Andrews, J.H. (1973). The leadership behavior of principals, staff morale, and productivity. Alberta Journal of Educational Research, 9, 179-191.

Kelly, G.A. (1955). The psychology of personal constructs. New York: W.W. Norton.

Krug, S.E. (1989). Leadership and learning: A measurement-based approach for analyzing school effectiveness and developing effective school leaders. In C. Ames & M.L. Maehr (Eds.) Advances in motivation and achievement, (Vol. 6, pp. 249-277). Greenwich, CT: JAI Press.

Krug, S.E., Scott, C.K., & Ahadi, S.A. (1989). An experience sampling approach to the study of principal instructional leadership I: Results from the principal activity sampling form. (Technical Report 8C2104-101). Champaign, IL: MetriTech, Inc.

Maehr, M.L., & Ames, R. (1988). Instructional leadership inventory. Champaign, IL: MetriTech.

Maehr, M.L., Braskamp, L.A., & Ames, R. (1988). Instructional Climate Inventory: Form T. Champaign, IL: MetriTech.

Maehr, M.L., & Fyans, L.J. (1990). School "culture," motivation and achievement. Ann Arbor: Leadership and Learning Laboratory (University of Michigan).

Martin, W.J., & Willower, D.J. (1981). The managerial behavior of high school principals. Educational Administration Quarterly, 17(1), 69-90.

McClelland, D.C. (1985). Human motivation. Glenview, IL: Scott Foresman.

Metz, M.I. (1978). Classrooms and corridors: The crisis of authority in desegregated schools. Berkeley: University of California Press.

Mitchell, D.E. (1990). Principal leadership: A theoretical framework for research. In P. Thurstone & P. Zodiates (Eds.), Advances in Educational Administration, (Vol. 2). Greenwich, CT: JAI Press.

Murphy, J. (1988). Methodological, measurement, and conceptual problems in the study of instructional leadership. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, LA.

National Center for School Leadership. NCSL Newsletter: Leadership and Learning. (1990, March)

Schainker, S.A., & Roberts, L.M. (1987). Helping principals overcome on-the-job obstacles to learning. Educational Leadership, 45, 30-33.

Scott, C.K., Ahadi, S.A., & Krug, S.E. (1990). An experience sampling approach to the study of principal instructional leadership II: A comparison of activities and beliefs as bases for understanding effective school leadership. (Technical Report 8C104-102). Champaign, IL: MetriTech, Inc.

Stonehouse, N. (1987). A comparative investigation of personal incentives, perceived opportunities, and organizational culture among administrative and teaching staffs in elementary and secondary education. Unpublished doctoral dissertation, University of Nebraska, Lincoln.

Suddarth, E. (1987). Personal investment theory of motivation applied to elementary principals. Unpublished doctoral dissertation, Southern Illinois University, Carbondale, IL.

Yukl, G. (1981). Leadership in organizations. Engelwood Cliffs, NJ: Prentice-Hall.